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L3: Entry 67 of 86 File: USPT Jun 26, 2001

DOCUMENT-IDENTIFIER: US 6251391 B1
TITLE: Compositions containing dipepitidyl peptidase IV and tyrosinase or phenylalaninase for reducing opioid-related symptons

Abstract Text (1):
Compositions and methods are provided to reduce opioid-related symptoms in a human patient of an exorphin selected from the group consisting of a gluteomorphin and a caseomorphin, comprising a physiologically effective amount of a purified casomorphin inhibitor selected from the group consisting of a casomorphinase and a casomorphin ligand, a physiologically effective amount of a purified gluteomorphin inhibitor selected from the group consisting of a gluteomorphinase and a gluteomorphin ligand, and at least one of the group consisting of a physiologically acceptable carrier, adjuvant, excipient, buffer and diluent. In some embodiments, the compositions and methods further comprise a physiologically effective amount of an enkephalin inhibitor, preferably an enkephalinase, and a physiologically effective amount of an endorphin inhibitor, preferably an endorphinase. Preferrably the caseomorphinase is dipeptidyl peptidase IV and the gluteomorphinase is tyrosinase or phenylalaninase.

Brief Summary Text (14):
Thus, in one aspect the present invention provides compositions able to reduce opioid-related symptoms in a human patient of an exorphin selected from the group consisting of a gluteomorphin and a casomorphin, comprising a physiologically effective amount of a purified casomorphin inhibitor selected from the group consisting of a casomorphinase and a casomorphin ligand, a physiologically effective amount of a purified gluteomorphin inhibitor selected from the group consisting of a gluteomorphinase and a gluteomorphin ligand, and at least one of the group consisting of a physiologically acceptable carrier, adjuvant, excipient, buffer and diluent. In a preferred embodiment, the casomorphinase is a proline protease, further preferably a protease comprising the dipeptidase activity of dipeptidyl peptidase IV. (The present invention comprises multiple aspects, features and embodiments; such multiple aspects, features and embodiments can be combined and permuted in any desired manner.)

Detailed Description Text (14):
A "proline protease" is a protease that cleaves a protein or a peptide on the basis of the presence of a proline amino acid in the sequence of the protein or peptide. "Dipeptidyl peptidase IV" ("DPP IV") is a Dipeptidyl peptidase that cleaves peptides comprising a proline at the penultimate position at the amino-terminus of the peptide. Handbook of Proteolytic Enzymes," CLAN SC-S9, .sctn. 128, p. 378-382 (Academic Press, Barrett, et al., eds., 1998). Similarly, a "tyrosinase" is a protease that cleaves, oxidizes and/or reduces a protein on the basis of a tyrosine in the protein. "Phenylalaninase" is an example of another exomorphinase, which cleaves, oxidizes and/or reduces a protein on the basis of a phenylalanine in the protein. A "microbe" means microscopic organisms, including organisms such as bacteria and fungi.

Detailed Description Text (22):
The compositions of the present invention are preferably administered orally, but may also be administered via other direct routes, such as rectal or, in the case of pharmaceutically designed compositions, via transcutaneous methods such as intraarterial, intramuscular, intraperitoneal, subcutaneous, intraocular, and intravenous. Other routes such as buccal/sublingual, nasal, topical (such as transdermal and hypothalamic), vaginal and pulmonary may also be used, if desired. The compositions are typically administered to human beings, but may also be administered

to animals, preferably mammals, displaying relevant symptoms.

Other Reference Publication (10):
Krepela E., et al., "Demonstration Of Two Molecular Forms Of Dipeptidyl Peptidase IV In Normal Human Serum," Physiol. Bohemoslov 32(6):486-96 (1983) (Abstract).

CLAIMS:

1. A treatment composition able to reduce opioid-related symptoms in a human patient of an exorphin selected from the group consisting of a gluteomorphin comprising an amino acid sequence of Gly-Tyr-Tyr-Pro-Thr (SEQ ID NO:2) and a casomorphin comprising the amino acid sequence Tyr-Pro-Phe-Pro (SEQ ID NO:1), comprising a physiologically effective amount of a purified casomorphinase comprising dipeptidyl peptidase IV, a physiologically effective amount of a purified gluteomorphinase comprising tyrosinase or phenylalaninase, and at least one of the group consisting of a physiologically acceptable carrier, adjuvant, excipient, buffer and diluent.